STATEMENT FOR THE APPLICANT

BRL Holdings, LLC - Property Owner

FOR A VARIANCE IN ACCORDANCE WITH SECTION 22A-21

OF THE MONTGOMERY COUNTY CODE

PRELIMINARY PLAN NO. 12020170

COLLEGE VIEW CAMPUS

Revised April 15, 2020

I. BACKGROUND INFORMATION

The Applicant, BRL Holdings, LLC, makes this request for a variance pursuant to the provisions of Section 22A-21 of the Montgomery County Code. The Applicant is owner of the subject property, also designated as parcels P811 & P809 found on Tax Map FU13 and parcel P888 & Lot P79 found on Tax Map EU 63 and Tax Map FU13.

The Applicant proposes to develop the property in accordance with the current zoning classification which is CRT-0.75. The area of property proposed to be developed within this zoning classification is 4.98 acres. The property currently contains approximately 0.79 acre of forest cover of which 0.45 acre is within a stream valley buffer. The stream valley buffer area includes steep slopes, floodplain, wetlands, and significant trees. Outside of the stream buffer within the site and on adjacent properties there are additional significant and specimen sized trees as shown on the approved Natural Resources Inventory / Forest Stand Delineation Plan (NRI/FSD) prepared for the property.

II. APPLICANT’S PROPOSAL

The subject property is proposed to be development with 3 new buildings which will contain residential and commercial units as depicted on the Preliminary Plan. Along with the 3 new buildings, the site will contain new roads, access driveways, parking areas, and other features typical of a development of this type.

In order to develop the site as proposed, a portion of the existing forest which is outside of the stream valley buffer is proposed to be cleared. In addition, certain impacts to specimen trees will result from the planned development. Accordingly, a variance is being requested for impacts to specimen trees. The 3 specimen trees impacted by the planned development are as follows:
<table>
<thead>
<tr>
<th>TREE NUMBER</th>
<th>BOTANICAL NAME</th>
<th>COMMON NAME</th>
<th>SIZE (D.B.H.)</th>
<th>TREE CONDITION</th>
<th>% CRZ IMPACTED</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST-1</td>
<td>Quercus alba</td>
<td>White Oak</td>
<td>37.9”</td>
<td>Moderate-Poor</td>
<td>9%</td>
<td>Retain</td>
</tr>
<tr>
<td>ST-5</td>
<td>Acer saccharinum</td>
<td>Silver Maple</td>
<td>46.7”</td>
<td>Poor</td>
<td>93%</td>
<td>Remove</td>
</tr>
<tr>
<td>ST-16</td>
<td>Quercus rubra</td>
<td>N. Red Oak</td>
<td>52.9”</td>
<td>Moderate-Poor</td>
<td>42%</td>
<td>Remove</td>
</tr>
</tbody>
</table>

ST-1, a 37.9” White Oak in moderate-poor condition is located off-site within the public right-of-way area of Frederick Road. The tree will only be slightly impacted by on-site activities associated with installation of a new public sidewalk. The tree is proposed to be retained.

ST-5, a 46.7” Silver Maple, is located on-site within the area to be developed. The tree is adjacent to Cider Barrel Drive (as extended through the site) which will result in impacts to the root zone of the tree from road grading, pavement installation, utilities, and other site improvements necessitated by the placement of the extended roadway. The tree is proposed to be removed due to the severity of the impacts with mitigation planting to occur on-site.

ST-16, a 52.9” Northern Red Oak, is located off-site within an existing category one conservation easement area adjacent to the northern boundary of the subject property. The tree is approximately 7 feet from the boundary line. The tree is in declining condition as stated on the approved NRI/FSD. The tree will be impacted by the placement of proposed Building A which is planned to be located 12 feet from the northern boundary line. The tree will become a hazard if left standing due to the loss of approximately 42% of critical root zone. It is recommended for removal with mitigation planting to be provided on-site.

III. SATISFACTION OF THE CRITERIA LISTED IN SECTION 22A-21(b) OF THE MONTGOMERY COUNTY CODE

A Chapter 22A variance is required in order to secure approval of the disturbance of the 3 identified trees that are considered priority for retention and protection under the Natural Resources Article of the Maryland Annotated Code and the County Code. This variance request is submitted pursuant to Section 22A-21 of Chapter 22A of the County Code and Section 5-1607(c) and Section 5-1611 of Title 5 of the Natural Resources Article of the Maryland Annotated Code (the “Natural Resources Article”).

Under the County Code, Section 22A-21(b) lists the criteria for the granting of the variance requested herein. The following narrative explains how the requested variance is justified under the set of circumstances described above.
“(l) Describe the special conditions peculiar to the property which caused the unwarranted hardship.”

Unwarranted hardship is demonstrated, for the purpose of obtaining a Chapter 22A variance when an applicant presents evidence that denial of the variance would deprive the Applicant of the reasonable and substantial use of the property. Section 22A-21 of the County Code authorizes the granting of a variance under that chapter when an applicant “shows that enforcement would result in unwarranted hardship.”

Natural Resources Article Section 5-1611 authorizes the Planning Board to grant a forest conservation variance “where owing to special features of a site or other circumstances, implementation of this subtitle would result in unwarranted hardship to the applicant.” In this case, the Applicant would suffer unwarranted hardship if disturbance or removal of the designated trees were not allowed.

With respect to specimen tree ST-1, this tree is located in front of an adjacent property within the public right-of-way of Frederick Road. A sidewalk exists along the front of the adjacent property along Gunners Court. The proposed plan to install a new sidewalk along the front of the subject site with a connection to the existing sidewalk provides a public benefit but results in minor impacts to the specimen tree. If the variance to impact ST-1 was not approved, the applicant would not be able to install the sidewalk connection.

ST-5 is located adjacent to the planned extension of Cider Barrel Drive through the site. Cider Barrel Drive dead-ends at both the northern and southern boundaries of the property. As such, the location of extended Cider Barrel Drive was pre-determined and not under the control of the applicant. The extension of Cider Barrel Drive impacts a significant portion of the critical root zone of ST-5 which would result in the tree becoming a hazard if the tree were to remain. If the variance to impact ST-5 was not approved, the extension of Cider Barrel Drive would not be possible.

ST-16 is located close to the northern boundary of the subject property and is off-site within an existing conservation easement area. The tree has already been impacted by development of the adjacent property to the north with utility lines, a parking area, and a townhouse unit located with its critical root zone. The conservation easement area where this tree is located is only 37 feet in width. With nearly half of the CRZ of this tree extending across the northern boundary line into the subject site, any reasonable development of the site using the CRT zone would result in impacts to the tree. Furthermore, the tree is in declining condition as stated on the approved NRI/FSD. Plans for development of the subject property propose a building approximately 19 feet from the tree. The new building impacts all of the root zone extending into the site. The development pattern of the site was pre-determined by the location of existing Cider Barrel Drive to the east and the presence of a stream buffer to the west. Due to these
circumstances and the expectation of a certain type of development in the CRT zone, the impacts to ST-16 are unavoidable. If the variance to impact ST-16 was not approved, development of the site in accordance with the CRT zone would not be possible.

“(2) Describe how enforcement of these rules will deprive the owner of rights commonly enjoyed by others in similar areas.”

Without this variance, the Applicant would be deprived from the ability to, based on the existing CRT zoning, implement their plan and would thus be deprived of reasonable use of their property that would be available to others. Other owners in Montgomery County have impacted or removed specimen trees in order to redevelop a site already in use, further develop as allowed by existing zoning, and improve access to their properties, all of which are implicated in this case.

“(3) Verify that State water quality standards will not be violated or that a measurable degradation in water quality will not occur as a result of the granting of the variance.”

In conjunction with its proposed development of the subject property, the applicant has prepared a Stormwater Management Concept Plan. This proposed concept proposes proper measures to protect stormwater quality and quantity that may impact the subject property and surrounding area. The proposed concept complies with current Environmental Site Design to the Maximum Extent Practical in conformance with stormwater management regulations. In addition, the applicant proposes to reforest the unforested portion of the on-site stream valley buffer which will aid in enhancing and protecting water quality.

“(4) Provide any other information appropriate to support the request.”

The information set forth above satisfies the criteria to grant the requested variance to allow the proposed development to impact 1 protected tree and to remove 2 protected trees as part of the proposed development application.

Furthermore, the Applicant’s request for a variance complies with the “minimum criteria” of Section 22A-21(d) for the following reasons:

1. The Applicant will receive no special privileges or benefits by the granting of the requested variance that would not be available to any other applicant;
2. The configuration of the subject property, regulatory requirements, and the location of the protected trees are not the result of actions by the Applicant, since any similar development of the subject property as a CRT zoned development would encounter the same constraints;
3. The requested variance is not due to a condition relating to land or building use, either permitted or nonconforming, on a neighboring property; and
4. The impact to 1 specimen tree and the removal of 2 other specimen trees will not violate State water quality standards or cause measurable degradation in water quality for the reasons stated above.

For all the above reasons, the Applicant respectfully requests approval of this request for a variance from provisions of Section 22A-21 of the Montgomery County Code.

Submitted on behalf of the Applicant, BRL Holdings, LLC

By:

Benning & Associates, Inc.
David W. McKee
September 25, 2020

Mr. Jonathan Casey, Senior Planner  
Up-County Division  
The Maryland-National Capital Park & Planning Commission  
8787 Georgia Avenue  
Silver Spring, Maryland 20910-3760

RE: Preliminary Plan No. 120200170  
College View Campus  
REVISED LETTER

Dear Mr. Casey:

We have completed our review of the revised preliminary plan uploaded to eplans on July 28, 2020. A previous version of this plan was reviewed by the Development Review Committee (DRC) at its meeting on March 31, 2020. We recommend approval of the plan subject to the following comments:

All Planning Board Opinions relating to this plan or any subsequent revision, project plans or site plans should be submitted to the Montgomery County Department of Permitting Services in the package for record plats, storm drain, grading or paving plans, or application for access permit. This letter and all other correspondence from this department should be included in the package.

Significant Plan Review Comments

1. The applicant must install a traffic signal at the intersection of Oxbridge Drive and Frederick Road (MD 355). Prior to issuance of the right-of-way permit, the applicant will need to submit the detailed/engineered traffic signal plans to MCDOT and SHA for review and approval. The applicant will need to obtain the MCDOT’s and SHA approval of the traffic signal construction plans prior to issuance of the first building permit. The traffic signal must be constructed prior to the release of the second use and occupancy permit for the site. Please coordinate with Maryland State Highway Administration (MDSHA) and Mr. Kamal Hamud of our Transportation Systems Engineering Team at (240) 777-2190 or at kamal.hamud@montgomerycountymd.gov for proper executing procedures. All costs associated with the new traffic signal shall be the responsibility of the applicant.

2. The applicant is proposing signal optimization to reduce the average delay at the intersections of Middlebrook Road/Frederick Road (MD 355) and Germantown Road (MD 118)/Frederick Road (MD 355). MCDOT has reviewed the signal optimization proposals and accepts the applicant’s
consultant’s findings. The signal optimization shall be completed prior to release of the second use and occupancy permit for the second building for the site.

3. The existing access from eastbound Germantown Road (MD 118) to southbound Cider Barrel Drive must be right-in/right-out movements. Therefore, on the certified preliminary plan, this portion of the intersection should be shown as channelized to allow only right-in/right-out movements. The channelization shall be complete prior to release of the first use and occupancy certificate (permit) for the second building of the site.

4. Prior of release of the first use and occupancy permit for the site, the applicant must construct an off-site, natural surface trail connection from the southwest portion of the site to the eastern parking lot of the Montgomery College Germantown campus.

5. As part of the “Clarksburg to City of Gaithersburg Breezeway” on Page 251 of the 2018 Bicycle Master Plan, the applicant will be required to construct a 16-foot wide, asphalt breezeway along the Frederick Road (MD 355) site frontage. On the certified preliminary plan, revise the path dimension from a 10-foot wide path to a 16-foot wide path. The breezeway must be constructed prior to release of the first use and occupancy permit.

6. The applicant will be required to relocate the existing bus shelter along Frederick Road (MD 355) to the southwest side of the intersection of Proposed Street A and Frederick Road. The replacement shelter landing pad is to be no less than 8-feet deep by 22-feet wide with a 6-inch wire reinforcing mesh and sunken electrical conduit to the nearest utility pole. At or before the permit stage, please contact Mr. Wayne Miller of our Division of Transit Services to coordinate these improvements. Mr. Miller may be contacted at 240-777-5836 or at Wayne.Miller2@montgomerycountymd.gov.

7. The Countywide Transit Corridors Functional Master Plan recommends a 250-foot right-of-way for Frederick Road (MD 355), pending completion of the Mid-County Highway Extension (M-83) and the Countywide Bus Rapid Transit (BRT) facility planning studies. Following completion of these studies, the Council may by resolution set a smaller minimum right-of-way, but not less than 150 feet. MCDOT consulted with the DOT Transit staff, and based upon the current design of BRT Alternative C, they determined that the proposed 150-foot right-of-way is sufficient for the existing and planned transit and vehicle traffic along this site’s frontage.

Standard Plan Review Comments

8. Provide full width dedication and construction of all interior public streets. No design exceptions were requested for these streets.
   - Public Street A: 60-foot right-of-way that shall be classified as a Business District Street using the Standard No. MC-2005.01 cross section.
• Cider Barrel Drive extension: 70-foot right-of-way that shall be classified as a Primary/Principal Secondary Residential Street using the Standard No. MC 2003.12 cross section.

9. Grant necessary slope and drainage easements. Slope easements are to be determined by study or set at the building restriction line.

10. No steps, stoops, retaining walls, private stormwater management or other permanent structures for the development are allowed in the County right-of-way.

11. The storm drain analysis was reviewed and is acceptable to MCDOT. No improvements are needed to the downstream public storm drain system for this plan.

12. Size storm drain easement(s) prior to record plat. No fences will be allowed within the storm drain easement(s) without a revocable permit from the Department of Permitting Services and a recorded Maintenance and Liability Agreement.

13. In all underground utility installations, install identification tape or other “toning” device approximately two feet above the utility.

14. Grade establishments for all new public streets and/or pedestrian paths must be approved by MCDPS prior to submission of the record plat.

15. The sight distance study has been accepted. A copy of the accepted Sight Distance Evaluation certifications form is enclosed for your information and reference.

16. Provide a minimum five-foot continuous clear path (no grates) sidewalk along all public streets.

17. Provide on-site handicap access facilities, parking spaces, ramps, etc. in accordance with the Americans with Disabilities Act.

18. If the proposed development will alter any existing street lights, signage and/or pavement markings, please contact Mr. Dan Sanayi of our Traffic Engineering Design and Operations Section at (240) 777-2190 for proper executing procedures. All costs associated with such relocations shall be the responsibility of the applicant.

19. Trees in the County rights of way – spacing and species are to be in accordance with the applicable MCDOT standards. Tree planning within the public right of way must be coordinated with DPS Right-of-Way Plan Review Section.

20. Posting of a right-of-way permit bond is a prerequisite to DPS approval of the record plat. The right-of-way permit will include, but not necessarily be limited to, the following improvements:

   A. Street grading, paving, curbs, gutters, storm drain & appurtenances, sidewalks, handicap ramps, and street trees along all interior public streets.
B. Paving, curbs, gutters, sidewalks and handicap ramps along Cider Barrel Drive associated with the above Comment No. 3 in this letter.

C. Permanent monuments and property line markers, as required by Section 50-4.3(G) of the Subdivision Regulations.

D. Erosion and sediment control measures as required by Montgomery County Code 19-10(02) and on-site stormwater management where applicable shall be provided by the Developer (at no cost to the County) at such locations deemed necessary by the Department of Permitting Services (DPS) and will comply with their specifications. Erosion and sediment control measures are to be built prior to construction of streets, houses and/or site grading and are to remain in operation (including maintenance) as long as deemed necessary by the DPS.

E. The developer shall provide street lights in accordance with the specifications, requirements, and standards prescribed by the MCDOT Division of Traffic Engineering and Operations.

Thank you for the opportunity to review this preliminary plan. If you have any questions or comments regarding this letter, please contact me at william.whelan@montgomerycountymd.gov or (240) 777-2173.

Sincerely,

William Whelan

William Whelan
Development Review Team
Office of Transportation Policy

Enclosures (1) Sight Distances

cc: Plan letters notebook

cc-e: Thomas Brault BRL Holdings, LLC
      Brad Fox Bohler Engineering
      Jefferey Server MNCP&PC
      Chris Van Alstyne MNCP&PC
      Sam Farhadi MCDPS RWPR
      Mark Terry MCDOT DTEO
      Kutty Menon MCDOT DTEO
      Kamal Hamud MCDOT TMD
      Wayne Miller MCDOT DTS
September 25, 2020

Mr. Chris Van Alstyne, Transportation Planner Coordinator
Up-County Division
The Maryland-National Capital
Park & Planning Commission
8787 Georgia Avenue
Silver Spring, Maryland 20910-3760

RE: College View Campus
Traffic Impact Study Review &
Traffic Signal Warrant Analysis

Dear Mr. Van Alstyne:

We have completed our review of the revised Local Area Transportation Review and Transportation Policy Area Review (TIS) report and Traffic Signal Warrant Analysis (TSWA) dated August 23, 2019, prepared by Gorove Slade. Total development evaluated by the analysis includes:

- 142 multi-family residential units
- 15,000 square feet of office space
- 32,887 square feet of research and development

Based on the TIS and TSWA reports, we offer the following comments:

Adequacy Determination

1. The study indicates that the proposed development generates more than 50-peak hour person trips. The pedestrian, bicycle and transit adequacy tests are not required since the development generates fewer than 50-peak hour trips.

Motor Vehicle System Adequacy

1. The subject development is required to meet the Local Area Transportation Review (LATR) test for motor vehicle system adequacy. The LATR test for the Germantown East policy area uses the
Critical lane Volume (CLV) Congestion standard of 1425 and Highway Capacity Manual (HCM) with an average vehicle delay standard of 51 seconds per vehicle. The consultant studied seven (7) intersections, including the two (2) future intersections of Street A, the site-access road with Frederick Road (MD 355) and Cider Barrel Drive.

2. Per the report, five of the study intersections will continue to operate within the CLV congestion standard of 1,425. Two intersections, Frederick Road (MD 355)/Germantown Road (MD 118) and Frederick Road (MD 355)/Middlebrook Road will operate above the CLV threshold. The CLV numbers are as follow:

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Existing Conditions</th>
<th>Background Conditions</th>
<th>Total Future Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM Peak Hour</td>
<td>PM Peak Hour</td>
<td>AM Peak Hour</td>
</tr>
<tr>
<td>Germantown Road &amp; Cider Barrel Drive</td>
<td>588 673</td>
<td></td>
<td>774 931</td>
</tr>
<tr>
<td>Frederick Road &amp; Germantown Road</td>
<td>1221 1583</td>
<td></td>
<td>1473 1871</td>
</tr>
<tr>
<td>Frederick Road &amp; Oxbridge Drive</td>
<td>1010 1195</td>
<td></td>
<td>1107 1290</td>
</tr>
<tr>
<td>Frederick Road &amp; Site Driveway</td>
<td>672 1075</td>
<td></td>
<td>728 1170</td>
</tr>
<tr>
<td>Frederick Road &amp; Cider Press Place</td>
<td>700 1094</td>
<td></td>
<td>756 1190</td>
</tr>
<tr>
<td>Frederick Road &amp; Middlebrook Road</td>
<td>1087 1392</td>
<td></td>
<td>1208 1532</td>
</tr>
<tr>
<td>Cider Barrel Drive &amp; Site Driveway</td>
<td>-- --</td>
<td></td>
<td>-- --</td>
</tr>
</tbody>
</table>

3. HCM analyses were conducted on the Frederick Road (MD 355)/Germantown Road (MD 118) and Frederick Road (MD 355)/Middlebrook Road intersections to compare to the 51 seconds/vehicle delay standard. The study found the following:

a) Under existing conditions, the Frederick Road (MD 355)/Germantown Road (MD 118) intersection operates at 50.1 seconds delay in the AM and 102.3 seconds in the PM peak hours. The background conditions are 70.3 seconds delay in the AM and 82.2 seconds in the PM peak hours. The total future delays are 71.5 seconds AM and 83.3 seconds PM. All of these delays, with the exception of the existing AM, exceed the 51 second standard.

b) The existing Middlebrook Road/Frederick Road (MD 355) intersection operates at 69.2 seconds delay in the AM and 74.0 seconds in the PM peak hours. The background conditions are 72.8 seconds delay in the AM and 92.3 seconds in the PM peak hours. The
total future delays are 73.1 seconds AM and 93.8 seconds PM. All of these delays exceed the 51 second standard.

c) The applicant is proposing signal optimization to reduce the average delay at each of the above-mentioned intersections. The proposed signal optimization at the Frederick Road (MD 355)/Germantown Road (MD 118) intersection will reduce the average vehicle delay from 71.5 to 61.7 seconds in the AM peak hour, and from 83.3 to 71.0 seconds in the PM peak hour. The proposed signal optimization at the Middlebrook Road/Frederick Road (MD 355) intersection will reduce the average vehicle delays from 73.1 to 68.0 seconds in the AM peak hour, and from 93.8 to 90.1 seconds in the PM peak hour. While the signal timing improvements do not reduce delay below the 51 second standard for the Germantown East policy area, they do reduce the delay to below background conditions, which fully mitigates the delay caused by this Application, as acceptable according to the LATR guidelines. MCDOT has reviewed the signal optimization proposals and accepts the applicant’s consultant’s findings. The signal optimization shall be completed prior to issuance of the third building permit for the site.

**Pedestrian and Bicycle Impact Statement**

1. Although there was not a separate Pedestrian and Bicycle Impact Statement provided within the body of the report, the consultant provided an evaluation of the pedestrian, bicycle and transit infrastructure for the studied intersections and roads. The report evaluated crosswalks and pedestrian crossing timing at each signalized intersection, indicating their adequacy.

2. The consultant provided the location of sidewalks, pedestrian signal heads, streetlight information, accessible ramps and bus stops and routes within the study area.

**Traffic Signal Warrant Analysis**

1. Per the report, traffic signals are warranted at the intersections of Germantown Road (MD 118)/Cider Barrel Drive and Frederick Road (MD 355)/Oxbridge Drive. However, based upon the size of this development and its impact on these intersections, we recommend the following:
   a. The applicant must install a traffic signal at the intersection of Oxbridge Drive and Frederick Road (MD 355). Prior to issuance of the right-of-way permit, the applicant will need to submit the detailed/engineered traffic signal plans to MCDOT and SHA for review and approval. The applicant will need to obtain the MCDOT’s and SHA approval of the traffic signal construction plans prior to issuance of the first building permit. The traffic signal must be operational prior to the issuance of the third building permit for the site. Please coordinate with Maryland State Highway Administration (MDSHA) and Mr. Kamal
Hamud of our Transportation Systems Engineering Team at (240) 777-2190 or at kamal.hamud@montgomerycountymd.gov for proper executing procedures. All costs associated with the new traffic signal shall be the responsibility of the applicant.

b. Rather than install a traffic signal at the Germantown Road (MD 118)/Cider Barrel Drive intersection, the existing access from eastbound Germantown Road (MD 118) to southbound Cider Barrel Drive should be channelized to allow only right-in/right-out movements. The channelization shall be completed prior to issuance of the first building permit.

**SUMMARY**

1. The findings of the LATR have been accepted. **We agree** with the consultant’s conclusion that all but two (2) of the seven (7) study intersections would continue to operate within the CLV congestion standard of 1,425.

2. Of the two failing intersections, HCM analyses were conducted on Frederick Road (MD 355)/Germantown Road (MD 118) and Frederick Road (MD 355)/Middlebrook Road intersections to compare to the 51 seconds/vehicle delay standard. The study found the following:
   a. In the existing conditions, the Frederick Road (MD 355)/Germantown Road (MD 118) intersection operates just below the standard in the AM but above the standard in the PM peak hours.
   b. In the both the AM and PM peak hours, the Frederick Road (MD 355)/Middlebrook Road intersection operates above the standard.
   c. Both intersections will operate above the standard in the total, future condition. However, with the proposed signal optimization and the future Black Hills improvements, the vehicle delays will be reduced. MCDOT has reviewed the signal optimization proposals, and we **accept** the applicant’s consultant’s findings. The signal optimization shall be completed prior to issuance of the third building permit for the site.

3. **We agree** with the consultant’s conclusion that a traffic signal is warranted at the intersection of Oxbridge Drive and Frederick Road (MD 355). The traffic signal must be operational prior to the issuance of the third building permit for the site.

4. The existing access at the Germantown Road (MD 118)/Cider Barrel Drive intersection must be channelized to allow only right-in/right-out movements. The channelization shall be completed prior to issuance of the third building permit.

5. **We concur** with the consultant that the pedestrian, transit and bicycle adequacy tests are not required.
Thank you for the opportunity to review this report. If you have any questions or comments regarding this letter, please contact me at william.whelan@montgomerycountymd.gov or at (240) 777-8504.

Sincerely,

William Whelan

William Whelan, Engineer III
Development Review Team
Office of Transportation Policy

cc: SharePoint\Correspondence

cc-e: Thomas Brault BRL Holdings, LLC
      Brad Fox Bohler Engineering
      Jefferey Server MNCP&PC
      Jonathan Casey MNCP&PC
      Kwesi Woodroffe MDSHA District 3
      Mark Terry MCDOT DTEO
      Kutty Menon MCDOT DTEO
      Kamal Hamud MCDOT DTEO
      Rebecca Torma MCDOT OTP
August 25, 2020

Ms. Katie Wagner
Gorove/Slade Transportation Planners
1140 Connecticut Avenue NW, Suite 600
Washington, DC 20036

Dear Ms. Wagner,

Thank you for the opportunity to review the Traffic Impact Study (TIS) prepared by Gorove/Slade Transportation Planners, dated August 8, 2020 for the 20220 Frederick Road Development– 19APMO028XX in Montgomery County, Maryland. The Maryland Department of Transportation State Highway Administration (SHA) review is complete and we are pleased to respond.

- The developer proposes redevelopment of the existing site to contain three (3) buildings consisting of 128 multifamily residential units, 43,450 square feet of office space, 5,000 square feet of ground floor retail, and 283 parking spaces.
- The proposed development will provide a signalized access at the intersection of MD 355 and Oxbridge Road and a right-in/right-out access on MD 118.
- The following intersections were analyzed under existing, background and future conditions:
  o Germantown Road (MD-118) X Cider Barrel Drive
  o Frederick Road (MD-355) X Germantown Road (MD-118)
  o Frederick Road (MD-355) X Oxbridge Drive
  o Frederick Road (MD-355) X Site Driveway
  o Frederick Road (MD-355) X Cider Press Place
  o Frederick Road (MD-355) X Middlebrook Road
  o Cider Barrel Drive X Site Driveway (Future)

  Based on the information provided, please address the following comments in a point-by-point response:

  **Travel Forecasting and Analysis Division (TFAD) Comments (Provided by Scott Holcomb):**

  1. TFAD has no objection to the proposed traffic signal at the MD 355/Oxbridge Drive intersection or the conversion of the Cider Barrel Drive approach to MD 118 to a right-in/out configuration. The conversion to the right-in/out condition will likely result in changes in trip distribution to the other local intersections along MD 355 and MD 118. Revised volumes
accounting for the change should be used in future timing analyses at the MD 355 intersections with MD 118 and Oxbridge Drive as this project advances.

2. Other previous comments from TFAD have been addressed adequately.

**Traffic Development & Support Division (TDSD) Comments (Provided by Errol Stoute):**

1. The applicant has addressed TDSD's comments. We have no additional comments at this time. TDSD concurs with District 3 Traffic comments pertaining to signalization at the intersection of MD 355 and Oxbridge Road.

**District 3 Traffic Comments (Provided by Alvin Powell):**

1. A Design Request (DR) will be required for design and installation of the traffic control signal at the intersection of MD 355 and Oxbridge Road. Please contact the District 3 Traffic Office for processing of the DR.
2. The proposed traffic control signal will need to incorporate pedestrian facilities.
3. Due to the proximity to the adjacent intersection of MD 355 and MD 118 (Germantown Road), the proposed traffic signal will need to be interconnected with the existing traffic signal at MD 355 and MD 118 for coordination of traffic flows.
4. The developer is required to identify any signal timing or phasing adjustments that may be required at the adjacent intersection of MD 355 and MD 118 to allow coordination and efficient traffic operations at these two intersections. These improvements are to be coordinated with the Montgomery County Department of Transportation.

If you have any questions or concerns, please contact me at 410-654-3790 or apowell@primeeng.com.

The SHA concurs with the report findings for this project as currently proposed and will not require the submission of any additional traffic analyses. However, an access permit will be required for all construction within the SHA right of way. Please provide an Electronic Submission containing the proposed improvement plans (including a set of hydraulic plans and computations) and all supporting documentation to the Access Management Division. For electronic submissions create an account with our online system [https://mdotsha.force.com/accesspermit](https://mdotsha.force.com/accesspermit). Please reference the SHA tracking number on any future submissions. Please keep in mind that you can view the reviewer and project status via SHA Access Management Division web page at [https://www.roads.maryland.gov/mdotsha/pages/amd.aspx](https://www.roads.maryland.gov/mdotsha/pages/amd.aspx). Please note, if this project has not obtained an SHA access permit and begun construction of the required improvements within five (5) years of this approval, extension of the permit shall be subject to the submission of an updated traffic impact analysis in order for SHA to determine whether the proposed improvements remain valid or if additional improvements will be required of the development.
If you have any questions, or require additional information, please contact Mr. Kwesi Woodroffe at 301-513-7347, by using our toll free number (in Maryland only) at 1-800-749-0737 (x7347), or via email at kwoodroffe@sha.state.md.us or shaamdpermits@sha.state.md.us.

Sincerely,

Andre Futrell,
District Engineer

AF/cmh

cc:

Mr. Cameron Abedi, MDOT SHA – TDSD
Ms. Lauren Campbell, Montgomery County Planning Department
Ms. Rola Daher, MDOT SHA – TFAD
Mr. Derek Gunn, MDOT SHA – District 3 Traffic
Mr. Scott Holcomb, MDOT SHA – TFAD
Mr. Robert Owolabi, MDOT SHA – District #3 Traffic
Mr. Alvin Powell, MODT SHA – District 3 Traffic
Mr. Errol Stoute, MDOT SHA – TDSD
Mr. William Stroud, MDOT SHA – TDSD
Mr. Chris Van Alstyne, Montgomery County Planning Department
Mr. William Whelan, Montgomery County Planning Department
Mr. Kwesi Woodroffe, MDOT SHA – Access Management Regional Engineer
DATE: 02-Jun-20
TO: Bradford Fox - bfox@bohlereng.com
    Bohler Engineering
FROM: Marie LaBaw
RE: College View Campus
     820200140 120200170

PLAN APPROVED

1. Review based only upon information contained on the plan submitted 28-May-20. Review and approval does not cover unsatisfactory installation resulting from errors, omissions, or failure to clearly indicate conditions on this plan.

2. Correction of unsatisfactory installation will be required upon inspection and service of notice of violation to a party responsible for the property.
August 7, 2020

Ms. Kelli DiPietro
Bohler Engineering
16701 Melford Blvd, Suite 310
Bowie, MD 20715

Re: COMBINED STORMWATER MANAGEMENT CONCEPT/SITE DEVELOPMENT STORMWATER MANAGEMENT PLAN for College View Campus
Preliminary Plan #: 120200170
SM File #: 285697
Tract Size/Zone: CRT075
Total Concept Area: 4.98 acres
Lots/Block: P79
Parcel(s): 809, 811 and 888
Watershed: Great Seneca Creek

Dear Ms. DiPietro:

Based on a review by the Department of Permitting Services Review Staff, the stormwater management concept for the above-mentioned site is acceptable. The stormwater management concept proposes to meet required stormwater management goals via green roof, bioretention, modular wetland system – linear and structural treatment in an existing stormwater management pond.

The following items will need to be addressed during the detailed sediment control/stormwater management plan stage:

1. A detailed review of the stormwater management computations will occur at the time of detailed plan review.
2. An engineered sediment control plan must be submitted for this development.
3. All filtration media for manufactured best management practices, whether for new development or redevelopment, must consist of MDE approved material.
4. Underground garages must not discharge to stormdrain or stormwater management facilities.

This list may not be all-inclusive and may change based on available information at the time.

Payment of a stormwater management contribution in accordance with Section 2 of the Stormwater Management Regulation 4-90 is not required.
This letter must appear on the sediment control/stormwater management plan at its initial submittal. The concept approval is based on all stormwater management structures being located outside of the Public Utility Easement, the Public Improvement Easement, and the Public Right of Way unless specifically approved on the concept plan. Any divergence from the information provided to this office; or additional information received during the development process; or a change in an applicable Executive Regulation may constitute grounds to rescind or amend any approval actions taken, and to reevaluate the site for additional or amended stormwater management requirements. If there are subsequent additions or modifications to the development, a separate concept request shall be required.

If you have any questions regarding these actions, please feel free to contact Jean Kapusnick, P.E. at jean.kapusnick@montgomerycountymd.gov or at 240-777-6345.

Sincerely,

Mark Etheridge
Mark C. Etheridge, Manager
Water Resources Section
Division of Land Development Services

cc: N. Braunstein
SM File # 285697

ESD: Required/Provided 20,966 cf / 15,478 cf
PE: Target/Achieved: 1.95"/1.44"
STRUCTURAL: 5,488 cf
WAIVED: 0.0 ac.
The only item on the form that needs revision is the total number of units, which should be 142. (104 is the number of market units.)

DHCA recommends Approval of the Preliminary Plan and Site Plan.

Lisa S. Schwartz  
Manager, Affordable Housing Programs Section  
Montgomery County DHCA  
1401 Rockville Pike, 4th Floor  
Rockville, MD  20852  
Work: 240-777-3786  
Fax: 240-777-3691  
lisa.schwartz@montgomerycountymd.gov  
www.montgomerycountymd.gov/mpdu

Hi Lisa,

I wanted to take a moment to follow up our conversation from back in June regarding approval from DHCA. I’ve reviewed the latest set of plans against your review comments and it appears that the applicant team has addressed them. I am including a completed MPDU worksheet and the latest site plan sheet, which includes the latest data table. Please let me know if we are any closer to an approval on this as we are looking to establish a Planning Board date in late September or early October. This is my first time working with this worksheet, so please let me know if there is anything that I need to revise, etc. Lastly, I will be out of the office next week for vacation, as will Jonathan Casey, so if there is a delay in responding that is why. Thanks in advance and talk soon.

Best regards,

Jeff

Jeff Server  
Planner Coordinator, Area 3  
Montgomery County Planning Department  
o: 301.495.4513
**Plan Name:** College View Campus

**Plan Number:** Site Plan No. 820200140 and Preliminary Plan No. 120200170

**Description of Proposed Development:** 3 lots for 2 multi-use buildings with 142 units and 1 commercial building, 25% MPDU's

**Development Information:** (See Submission Requirements)

Summarize and fill in all the following information below for summary of Moderately Priced Dwelling Unit(s) below (If an item requires more space, attach a separate sheet):

### MPDUs Summary

<table>
<thead>
<tr>
<th>Required List of Information Below:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of MPDUS (or equivalent)</td>
<td>38</td>
</tr>
<tr>
<td>Total number of Dwelling Units (DU's)</td>
<td>142</td>
</tr>
<tr>
<td>Percentage of MPDUs</td>
<td>25%</td>
</tr>
<tr>
<td>Bonus height associated with MPDUs (Ft)</td>
<td>-</td>
</tr>
<tr>
<td>Amount of Bonus density (sq. Ft)</td>
<td>-</td>
</tr>
<tr>
<td>Alternative compliance requested?</td>
<td>Y</td>
</tr>
</tbody>
</table>

#### Bedroom mix of market rate units (number of units & percent)

| Studio: 26 units | 25% |
| 1BDR: 60 units | 58% |
| 2BDR: 18 units | 17% |
| 3BDR: ______ units | ______% |

#### Bedroom mix of MPDUs (number of units & percent)

| Studio: 9 units | 24% |
| 1BDR: 22 units | 58% |
| 2BDR: 7 units | 18% |
| 3BDR: ______ units | ______% |

#### Townhouses or Two-over-Twos

(description of locations and number and size of bedrooms, if proposing townhouse or two-over-two development)

None.

#### Location of MPDUs dispersed in development

Y | N

#### Specific plan sheet number(s) showing the location and information pertaining to the MPDUs

C-4, Site Plan
We have reviewed site and landscape plans files:

“07-SITE-820200140-004.pdf V4” uploaded on/ dated “5/19/2020”,
“08-LL-820200140-004.pdf V3” uploaded on/ dated “5/19/2020” and

The followings need to be addressed prior to the certification of site plan:

1. Provide safe truck turning for all (especially right turn) movements.
2. Please note no permanent obstruction is permitted within public storm drain easement and a private parking lot is considered as such.
3. The proposed SWM facility within the Cider Barrel Drive pavement, remains under interagency review at this point.
4. Ensure public handicap ramps are fully contained within ROW.
5. On landscaping plan:
   a. Ensure the proposed trees will not obstruct the sight distance at intersections;
   b. Some of the trees are less than 20’ from the buildings so consider a more upright species in those locations.
Section 50.4.1.E of the Subdivision Regulations and Section 59.7.3.4.C of the Zoning Ordinance provide that the Planning Board shall hold a public hearing for Preliminary and Site Plans no later than 120 days after the date the application(s) are accepted. However, the Director may postpone the public hearing by up to 30 days once without Board approval and the Director or applicant may request one or more extensions beyond the original 30 days with Board approval.

The College View Campus joint Preliminary Plan and Site Plan application was accepted on March 12, 2020, which established an approval date no later than July 10, 2020. The Planning Director granted the first extension for a total of 30 additional days or until August 9, 2020. The Applicant has not obtained all required agency approvals in time for a Planning Board date of July 30, 2020. Approval from MCDOT and SHA has not yet been obtained due to on-going review for signal improvements at four studied intersections. Therefore, the Applicant requests a 90-day extension or until November 7, 2020.

Staff recommends approval of this extension request.

Attachment A: Extension Request
REGULATORY PLAN EXTENSION REQUEST

Plan Name: COLLEGE VIEW CATHARS
Plan No.: 20200176/20200140

This is a request for extension of: ☐ Project Plan ☐ Preliminary Plan ☑ Site Plan

The Plan is tentatively scheduled for a Planning Board public hearing on July 30, 2020.

The Planning Director may postpone the public hearing for up to 30 days without Planning Board approval. Extensions beyond 30 days require approval from the Planning Board.

Person requesting the extension:
☐ Owner, ☐ Owner's Representative, ☑ Staff (check applicable.)

THOMAS A. BARKER, DEE. HOLLOWAY/BOW LEWIS PLLC

Name: THOMAS A. BARKER, DEE. HOLLOWAY/BOW LEWIS PLLC
Affiliation/Organization: THOMAS A. BARKER, DEE. HOLLOWAY/BOW LEWIS PLLC
Street Address: 23407 FREDERICK ROAD
City: CLARKS LIVING
State: MD
Zip Code: 20871

Telephone Number: ext. Fax Number: E-mail:

We are requesting an extension for 3 months until 11-9-20

Describe the nature of the extension request. Provide a separate sheet if necessary.

SHA & DOT OFFSITE COORDINATION CONCERNS

Signature of Person Requesting the Extension

Signature: [Signature]
Date: 7-20-20
Extension Review

Planning Director Review for Extensions 30 days or less

I, the Planning Director, or Director’s designee, have the ability to grant extensions of the Planning Board public hearing date of up to 30 days and approve an extension of the Planning Board public hearing date from ________________ until ________________.

_________________________________________  ,  Date

Signature

Planning Board Review for Extensions greater than 30 days

The Montgomery County Planning Board reviewed the extension request on ________________ and approved an extension for more than 30 days of the Planning Board public hearing date from ________________ until ________________.
Statement of Justification for the Preliminary Plan & Site Plans
At 20220 Frederick Road, Germantown, MD 20895

Applicant:
BRL Holdings, LLC

PRELIMINARY PLAN NO. 120200170 & SITE PLAN NO. 820200140 (THE “APPLICATIONS”)

I. INTRODUCTION

The Applicant, 4000 BRL Holdings LLC (the “Applicant”), by its engineers and manager hereby submits this Justification Statement in Support of its Preliminary Plan of Subdivision & Site Plan Applications (the “Applications”) to demonstrate conformance of this Applications with all applicable review requirements and criteria.

The Applicant is a single purpose entity controlled by Ben Lewis who has owned the property for nearly 40 years known as 20220 Frederick Road, (“the Property”). Mr. Lewis has been a successful commercial plumber in Montgomery County for over 50 years. The Property consists of (Parcels 79, 888, 811 & 809) and is part of the Montgomery College District. The property is comprised of 216,948 square feet of which 34,786 square feet is zoned R-60. The gross tract area is comprised of 201,049 square feet which includes 18,887 square feet of land previously dedicated for Frederick Road and the 201,049 square feet is the basis for the density calculation. The property is zoned CRT 0.75 and R60/ TDR-12 as further articulated on the attached development table. The property was used as the headquarters of Ben Lewis Plumbing for 30 years until recently. Since then, the property has been used for charity depots to Haiti and for various landscaping offices.

The purpose of the subject Application is to create 3 recorded lots to allow for the construction of 2 multi-family residential buildings and 1 commercial building at the Property (the “Project”). Accordingly, the Applicant is seeking to record a subdivision plat in the Land Records following approval of this application concurrently with an associated Site Plan application. Prior to the submission of these Applications, the Applicant had several informal meetings and discussions with County Staff and the community. In addition, the Applicant formally processed a Concept Plan with Staff and obtained full DRC Comments. The Applicant and its design team made many changes to adhere to suggested comments from the staff and community as further described herein. The Applicant then presented at the pre-submission community meeting on January 8, 2020. As outlined in greater detail below, the Project satisfies all the required findings for approval of a Preliminary Plan of Subdivision & Site Plan.

II. PROJECT DESCRIPTION

The Project proposes the redevelopment of the Property to be located on 3 subdivision lots of record. The Project proposes several important transportation links for both internal and external vehicular, pedestrian and bicycle
connectivity in accordance with the Master Plan. The first is the connection of Cider Barrel Drive from the north through the project to the south as shown on the plans. This creates a western lot known as Lot A between Cider Barrel Drive and the Stream Valley / Montgomery College. Lot A is 95,894 SFT and will hold Building A and it proposes a total of 92 multi-family units.

The next vital transportation link was requested by both the community and County Staff. The Project proposes a public road between Cider Barrel Drive and Frederick Road. The Project will name this vital transpiration link pursuant to the most current subdivision regulations and processes. It should be noted that this link is not required under the Master Plan, but the Applicant and Team adhered to the community requests and proposes to dedicate the Right of Way for both Cider Barrel Drive and this important east west connection.

The introduction of this vital public street connection creates two eastern lots, one on the north and south side. The North lot is known as Lot B is 25,900 SFT and it will hold Building B and that proposes 45 multi-family units. And on the south side is Lot C that is 46,709 SFT and will hold Building C. This is a proposed laboratory building of 50,123 SFT.

In terms of the massing and height, the Project proposes to be at or below the 40’ height requirement on all buildings. The location of the buildings was carefully chosen with Staff to be in accordance with the Master Plan and to minimize impacts to neighbors and take advantage of the unique topography and existing screens. The proposed heights ensure roof line of the structures will be well below the ridgeline of the townhouses to the north. In addition, the building foot prints themselves were chosen to be as far away as possible from the attached homes with very large setbacks that exceed Master Plan and code minimums.

**Building A:**

Building A was chosen to be on the north east side of the Lot A because of the large grade change to its north and East. The overall site has a consistent downhill gradient from MD355 to the stream and from its north. To better understand this, an approximate slab on grade height of building A is 484’. The nearest townhouse to its north, 11900 Weybridge Lane, is a massive 90-foot setback away. The nearest townhouse to its east is 20300 Cider Barrel Drive, which is over 60’ from the proposed building.

However, these large setbacks are not the most compelling massing feature. Each of these units follows the 504’ contour graded in at time of construction. That puts the basic slab height of 20 feet taller BEFORE the start of the structures vertically. These are also four-story townhouses with not flat roofs, but ridge lines. Photos of these units can be found attached as Addendum A. When adding in the ridge, these two units will be significantly taller.
than that of Building A. There is also a large forestry easement north of building A that will shield its view from the northern neighbors.

By placing Building A on the northern property line, it also helps the adjacent units to the south. The proposed setback from 2012 Gunners Terrace is approximately 65-100 feet. The setbacks should be put further into context. They are setbacks from attached housing product that are less than 40 feet (1/2 the setback above) to 4-story attached product across their streets.

Building B

With respect to the existing topography on the north of Building B, there is an approximate 10’ grade jump plus a fence on the adjacent property as well as mature trees in the area. The units to the north are also 4-story products with ridge lines. In sum, close to 5-15 feet higher than our proposed roof line.

The addresses are 20300 to 20310 Noting Hill Way, see Addendum B below are significantly higher than our proposed structure, there is a natural architectural alignment to face one another. The owner of 20300 Noting Hill Way came to the community meeting and spoke in strong support of the project. The project is proposing a 12-foot setback from the property line and that creates an approximate total setback of 30’ very similar to both internal developments south and north. Thus, we propose Building B matches well with that frontage and though it’s only a 4-story structure, it will feel one story lower, all in accordance or exceeding the Master Plan recommendations.

Building C

With respect to Building C, it was positioned because there are no townhouses next to the tot lot. Thus, it has over 75-foot (verify) setback from the nearest townhouse. While most of the surrounding existing structures are four stories, the Project Proposes Building C to be just three stories.

The Project will provide adequate setback from adjoining properties and streets consistent with master plan and well below the development standards in the CRT zone.

As depicted on the Preliminary Plan, Vehicular access to the Project will be provided by existing Frederick Road, MD 355 via a right in and right out of newly proposed public street yet to be named. This is a reduction from 4 existing curb cuts, down to one.

Although not required to do so, after the Community Meeting, the Applicant is proposing to remove the no parking signage along Cider Barrell just south of the site and proposing to strip 6 new parking spaces north of the site.
on Cider Barrell. This will enhance the amount of parking requested by the residents and as per the current manor in which residents park.

REQUIRED FOR APPROVAL OF THE PRELIMINARY PLAN & SITE PLAN APPLICATIONS

In order to approve a preliminary plan of subdivision and site plan, pursuant to the most current Montgomery County subdivision regulations, the Planning Board must make certain findings. The Preliminary Plan application and site plan applications each satisfies the findings that the Planning Board must make as follows:

1. The Preliminary & Site Plans substantially conforms to the Sector Plan

The Project substantially conforms to the Germantown Sector Plan approved and adopted in 2009 (the “Sector Plan”). The Sector Plan locates the Property within the “Montgomery College District”. The Sector Plan envisions the District to “provide a network of streets with extensive pedestrian connections that create a walkable campus and technology park.” Sector Plan at 72 and overall the “Street character is defined by activities that occur on the sidewalks and how they interact with the uses and building” page 25. It further notes the “Colleges Goal’s to partner with private technology and medical business that may help expand the college’s mission”, at 71. The plan also notes the desire for increasing “high priority forest” page 71 and more housing is desirable will mean livelier and more active streets that are attractive for residents, shoppers, and visitors and increase the diversity of housing choices as well as providing for more affordable housing.

The Project responds to the Sector Plan’s call to provide pedestrian connections that create a walkable campus by completing Cider Barrell Drive with a 70 foot ROW and desired, large sidewalk connections on each side of Cider Barrell to the neighboring property’s as well as internal to the site. To enhance and anchor this public connectivity, two large areas of public open space areas are planned, one on each side of Cider Barrell in the heart of the Project that include bike racks, inclusive recreational elements, and enhanced plantings. In addition to the two central portions of public open space, each eastern and western terminus of the Project has more public open space. One is a large recreational, urban park amenity specifically called for on page 24 of the Plan, and the other is a linear park fronting on Frederick Road. The four large tracts of open space provide a balanced open space that is nearly double the minimum thresholds in the Plan.

In addition and of special note is the proposed connection to Montgomery Colleges adjacent campus through the Stream Valley Buffer. The connection is proposed in an environmental is sensitive way as approved and directed by MNCPPC forestry staff. All of these pedestrian and bicycle movements are recommended in the plan and specially mete by the Project details.

Further to the Sector Plan, the Project proposes more housing and more diverse housing types by proposing 25% affordable housing, and the first at grade covered parking in the local market as all nearby multi-family is 100%
surface parked. In this case, the Applicant design team is taking advantage of the grades and heights and not creating the additional cost for digging down but providing the benefit of covered parking for the future residents and business users at the Campus. The integration of a life sciences business use directly addresses the Sector Plans recommendation that Montgomery College look to partner with the private section. This is enhanced because the site is in Federal Opportunity zone, so it is attractive for businesses to locate there. Thus, the mixed-use nature of the project is a key element to meeting the Sector Plan goals.

The Project substantially conforms to the Sector Plan’s aspiration to enhance the environment. The project proposes to re-plat a large number of new trees in the previously cleared portion of the 125 foot stream valley buffer via reforestation of .22 acres. In addition, the current site is approximately 77% impervious coverage which consist of asphalt paving and various outbuildings. The site currently has no on-site treatment of stormwater and outfalls untreated to the pond on adjacent property with unsightly erosion. After construction, the project will have 10 to 20% less impervious coverage and meet all required storm water management codes.

2. Public Facilities will be adequate to support and service the area of the proposed subdivision

A. Roads and Transportation Facilities

Adequate public roads currently serve the Property. The Project is estimated to generate 111 peak hour trips in the morning and 112 in the afternoon. The roads are adequate for these proposed peak hour trips. Vehicles will access the Project via the creation of a new public street that will run east and west from Route 355 west to Cider Barrell. This is currently the only entrance in and out of the site. In addition to this public street, the Project proposes to connect Cider Barrell to the north and south through the middle of the site. This will provide a vital necessary link recommended on page 86 of the Master Plan. This connection will enable cars to use more than one access point onto Frederick Road. It was noted at the community meeting with a resident that this would aid their trip home from route 118 in that they could take Cider Barrell without need to go onto 355. The realization that this movement added their commute time brought a small and thanks during the community meeting.

Adequate transportation facilities serve the Property. The Property is located approximately 3 miles from the Germantown MARC Station and the Property is served by RideOn Bus routes 55. The site has an existing RideOn bus stop on the southeastern corner fronting on route 355, Frederick Road. Bus route 55 will take a rider directly to the Germantown Marc Train. Further, The Shady Grove Metro is approximately 9 miles away.

B. “MD 355 FLASH” - Buss Rapid Transit (BRT): Of special note, the site is along the proposed phase one route of the BRT route that runs from the Bethesda Metro Station to Germantown Middlebrook Road / Germantown Hospital. The second phase of the BRT is currently exploring differing routes that are
all near the site up to Clarksburg. Given the access to the BRT, the site is an excellent candidate for mixed use development, which is a key goal of the Sector Plan and District Plan.

C. Other Public Facilities

Other adequate public facilities and services are available and will be adequate to serve the Project. With regard to public school capacity, the Property is in the Clarksburg High School Cluster, and students generated by the Project would attend Clarksburg High School, Neelsville or Rocky Hill Middle School, and Fox Chapel Elementary School. At the time of filing of this Application, all schools have adequate capacity.

The Property is served by public water and sewer and is assigned WSSC categories W-1 and S-1. Public water and sewer line mains currently serve the Property, which will be adequate to serve the development proposed by the Project. Dry utilities including electricity, gas, and telephone are also available to the Property and have adequate supply. The project has four large public utility easements that will adequately supply these dry utilities, two are continued and match along Cider Barrel and two connect those to Frederick Road. One is along the new public street connecting 355 to Cider Barrel and the other along the south side of Building C, well suited for Washington Gas.

3 the layout of the subdivision, including size, width, shape, orientation and density of lots, and location and design of roads is appropriate for the subdivision given its location and the type of development or use contemplated and the applicable requirements of Chapter 59;

The size, width, shape, and orientation of the proposed lots are appropriate for Montgomery College District. The lots range from 0.6 acres to 2.20 acres in size and fit well in between the large new public roadways.

The design of roads are appropriate for the subdivision given the obvious need to match Cider Barrel’s existing size and location, so a full 70 foot ROW is proposed. Even with NO public road recommended to link Cider Barrell to 355 at this site, the Project proposes to do that and has shown a full 60 ‘ ROW with a parallel parking on the northern side per DOT pre-approved sections.

4. The application satisfies all the applicable requirements of the Forest Conservation Law, Montgomery County Code, Chapter 22A

The Project has an approved NRI / FSD and proposes a Preliminary and Final Forestry Plan as part of the Application. Refer to Benning Associates documents as a part of the Application. These two documents ensure the Project meets all the requirements of Chapter 22A per the Forest Conservation law.

5. The application meets all applicable stormwater management requirements and will provide adequate control of stormwater runoff from the site, based on the determination by MCDPS that the stormwater management concept plan meets MCDPS’ standards.
The Applicant will provide sediment and erosion control and water quality treatment for stormwater management as required by County laws, rules, and regulations. The Applicant has an approved stormwater management concept plan, demonstrating environmental site design to the maximum extent practicable as required by State and local regulations, and will continue to coordinate with MCDPS on all required sediment and erosion control and stormwater management approvals as the entitlement proves progresses.

IV. CONCLUSION

The Applicant respectfully requests that the Planning Board grant approval of the Applications, thereby allowing the construction of two multi-family buildings and one commercial building on the three new lots as permitted by the Zoning Ordinance. As explained above and in the plans submitted herein, the Project satisfies all of the findings that the Planning Board must make when approving the Application under the most current Zoning and Subdivision Regulations.

This Project provides an opportunity to complete vital vehicular and pedestrian connectively, make many environmental improvements from current site conditions, increase appropriate and desired mixed-use life sciences development in the Montgomery College District by adding new housing and laboratory uses. These new buildings will contribute to the Sector Plan’s vision of the Montgomery College District as a vibrant mixed-use walkable area with diverse residential and life science options appropriately positioned to take advantage of the CRT zone and federal opportunity zone.

Respectfully submitted,

BOHLER

By: __________________________
Addendum A

11900 Weybridge Lane
June 18, 2020

Attn: Mr. Chris Van Alstyne, Transportation Planner Coordinator
Montgomery Planning
8787 Georgia Avenue
Silver Spring, MD 20910

Re: Walking Trail Connection

Dear Mr. Van Alstyne:

I am writing to follow up the conversations that Montgomery College Facilities staff and I have had with you and your Area 3 Planning colleagues around the possibility of constructing a walking trail between Cider Barrel Drive off Frederick Road (Route 355) and the east side of the Germantown Campus at Observation Drive near the High Technology and Science Center, just north of Parking Lot #4. In general, the College is supportive of the concept, as access to the campus and enhanced walkability in the Germantown area are both important goals for the community.

As you are aware from our discussions, however, there are several matters that would need to be adequately addressed before the College would be willing to enter into a memorandum of agreement or otherwise be bound by any contract or requirement for this project. Summarily, our primary concerns are bulleted below:

- The Forest Conservation Easement on the College property would likely have to be amended. The College would not be responsible for pursuing this amendment.
- This project would need to minimize impact on the wetland areas where the trail is proposed.
- The College’s state land use plans envision certain use of our property which are not able to be re-evaluated at this time. Our priority remains with the College, the Pinkney Innovation Complex for Science and Technology (PIC MC), and the campus.
- The proximity of the proposed trail to the telescope pad currently being designed for the campus is of concern; the location of the pad was specifically designated to ensure ADA access, and to maximize darkness, security of equipment, and the students’ learning experience. A light study may be needed to determine the extent to which the viewability required for course instruction would be impacted by the lights on the trail. Alternatively, the walkway route could be altered.
- The College is concerned about the safety of the students and others walking through the forested portion of the trail, as it is visually obscured from the main area of campus. Frequent monitoring of the trail would create a hardship for the College’s current Public Safety staff.
- The expenses associated with the development and maintenance of the trail on the College’s property would need to be resolved, as the College already has projects underway that will exhaust its Capital Budget over the next several years.
The College desires to develop partnerships that seek to integrate and strengthen the private and public sectors for the betterment of the community. We believe this walking trail connection would be a tremendous resource to those in the planned community, and therefore are willing to engage in conversations with the developer as the planning takes place. Naturally, we would reserve the right to review and approve the plans, particularly as they affect the College’s property, but overall we support the concept of the trail connection project you are proposing.

We look forward to hearing from you as this proposal progresses. Please do not hesitate to contact me if you need any additional information at this point.

Sincerely,

[Signature]

Margaret Latimer, Vice President & Provost
Germantown Campus & Collegewide STEM Unit
Montgomery College
20200 Observation Drive, PK 108
Germantown, MD 20876
240-567-7711
Margaret.Latimer@montgomerycollege.edu
18 June 2020

20220 Frederick Road
Phase I Noise Analysis

Montgomery County, Maryland

Report No. 200617
Project No. BRL1901

For: BRL Holdings

By: Kyle Pritchard
1 EXECUTIVE SUMMARY
Phoenix Noise & Vibration has conducted an analysis of transportation noise impact upon 20220 Frederick Road in Montgomery County, Maryland. Upon completion, the project will consist of two multifamily buildings (Buildings A and B) and one multistory commercial building (Building C). This study was limited to noise impact from Frederick Road (MD 355), and included:

- Computer modeling.
- Determination of future noise levels.
- Preliminary mitigation recommendations to meet Montgomery County’s residential noise regulations.

Noise impact at 20220 Frederick Road will vary with height; therefore, impact has been presented at both the ground level (5 feet above adjacent grade), upper level (25 feet above adjacent grade), and across all future building facades. Impact is presented in varying levels of noise indicating the future roadway noise level. The noise levels presented are due only to Frederick Road and do not account for noise from other sources such as construction, mechanical noise, environmental noise, etc.

Calculated noise levels throughout the site and upon the future building facades are “mitigated;” i.e. accounting for the presence of existing topography, surrounding buildings, and significant structures, as well as the future site buildings. Structures along roadways act as noise barriers, providing protection from noise exposure and reducing the impact and extent of any potential mitigation required, if any, to comply with the noise regulations of Montgomery County.

Results of this analysis indicate that noise levels in the public open spaces to the east of Buildings B and C, directly adjacent to Frederick Road, will be above 60 dBA Ldn. While these areas are designated as public open spaces, they will consist of a public sidewalk and landscaping, and are not intended for extended periods of outdoor use. However, if these spaces qualify as areas subject to Montgomery County’s outdoor activity area guidelines, mitigation in the form of a berm or barrier will be required for these areas in order to maintain noise levels below 60 dBA Ldn. Conversely, noise levels in the three remaining public open spaces to the west will be below 60 dBA Ldn as these areas will be located sufficiently far from Frederick Road (MD-355). Mitigation for these remaining outdoor areas will not be required.

Living units located on the north, east, and south elevations of Building B will be exposed to future transportation noise levels above 60 dBA Ldn, with a maximum noise impact of 70 dBA Ldn expected upon upper level units on the east elevation. Further analysis of these impacted living units will be required to determine whether modifications to the proposed building construction will be necessary to maintain interior noise levels below 45 dBA Ldn within these living units.

All remaining living units (including those located on the west elevation of Building B as well as all living units throughout the entirety of Building A) will not be exposed to future transportation noise levels above 60 dBA Ldn. Further analysis of these living units will not be required, and
the proposed building construction may be used without modification for these units to maintain compliance with Montgomery County’s noise regulations for residential development.

Note that future noise impact determination in this analysis is based on a computer model alone and does not incorporate onsite noise measurements.\(^1\) Once onsite measurements are incorporated into the analysis, projected noise impact at the site may differ from the results presented in this analysis and at that time, this noise study will be updated as necessary.

2 **NOISE TERMINOLOGY**

2.1 **dB vs. dBA**
While the standard unit of measurement for sound is the decibel (dB), discussions of noise impacting the human ear use “dBA.” The “A” refers to a frequency weighting network used to simulate the human ear’s unequal sensitivity to different frequencies. The A-weighted noise level is therefore more representative of a human’s perception of a noise environment than the unweighted overall noise level in dB and is currently used in most environmental noise studies.

2.2 **Ldn**
The day-night average noise level, or Ldn, is the equivalent sound pressure level averaged over a 24-hour period, obtained by adding 10 dB to sound pressure levels measured from 10:00 p.m. to 7:00 a.m. This 10 dB “penalty” accounts for the added sensitivity caused by noise generated during the nighttime hours.

The Ldn is NOT a measurement of the instantaneous noise level. It is very possible to have several short term events (tractor trailer, emergency vehicle siren, car horn, etc.) which generate a relatively high noise level (e.g. 85 dBA) during a given time period but have a more moderate overall Ldn value (e.g. 65 dBA Ldn).

2.3 **Summing Noise Levels**
Noise levels from multiple sources do not add arithmetically, i.e. when two noise sources generate 60 dB individually, they do not produce 120 dB when combined. Noise levels are measured using a logarithmic scale; therefore, they must be summed logarithmically. In the decibel scale, two identical, non-coherent noise sources having the same noise level produce a 3 dB increase above the condition of one source alone (i.e. two 80 dB lawnmowers running at the same time generates 83 dB).

Similarly, two different noise sources with a difference of 10 dB in their individual levels results in no measurable increase in noise when they are combined. Put another way, the quieter noise source does not increase the overall noise generated by the louder source, i.e. adding an 80-dB lawnmower into a noise environment where a 90-dB lawnmower is already running does not increase the noise level above 90 dB.

---

\(^1\)See Section 5 – Noise Measurements.
3 NOISE REGULATION

Traffic noise impact for proposed residential developments in Montgomery County is governed by Table 2-1 (reprinted in Table 1) on page 8 of the Staff Guidelines for the Consideration of Transportation Noise Impacts in Land Use Planning and Development (June 1983). Accompanying this table is Map 2-1 (see Figure 1), indicating outdoor noise level requirements not to be exceeded throughout the County.

<table>
<thead>
<tr>
<th>Guideline Value</th>
<th>Area of Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ldn = 55 dBA</td>
<td>This guideline is suggested as an appropriate goal in permanent rural areas of the County where residential zoning is for five or more acres per dwelling unit and background levels are low enough to allow maintenance of a 55 dBA Level. This guideline is consistent with Federal, State, and County goals for residential areas.</td>
</tr>
<tr>
<td>Ldn = 60 dBA</td>
<td>This is the basic residential noise guideline which will be applied in most areas of the County where suburban densities predominate. Maintenance of this level will protect health and substantially prevent activity interference both interiors and outdoors. Noise attenuation measures will be recommended to allow attainment of this level.</td>
</tr>
<tr>
<td>Ldn = 65 dBA</td>
<td>This guideline will generally be applied in the urban ring, freeway, and major highway corridor areas, where ambient levels are such that application of a stricter guideline would be infeasible or inequitable. Significant activity interference will occur outdoors and interiors if windows are partially opened, but available evidence indicates hearing is adequately protected. Noise attenuation measures will be strongly recommended to attain this level.</td>
</tr>
</tbody>
</table>

According to Map 2-1, 20220 Frederick Road is located within the 60 dBA Ldn noise zone, indicating that noise levels in the building’s outdoor activity areas should be maintained at 60 dBA Ldn or below. Any outdoor area exposed to future transportation noise levels above 60 dBA Ldn typically requires further analysis to determine the mitigation designs necessary to comply with this requirement.

When outdoor noise levels exceed 60 dBA Ldn, Montgomery County also requires an analysis of interior noise levels in residential buildings. According to Sections 2.2.2 and 2.2.3 of the Staff Guidelines, any residential building impacted by noise levels above 60 dBA Ldn must be evaluated to certify that the building structure will be capable of maintaining interior noise levels at 45 dBA Ldn.
Figure 1: Map 2-1 from *Staff Guidelines for the Consideration of Transportation Noise Impacts in Land Use Planning and Development*, June 1983; approximate location of 20220 Frederick Road indicated on the map in red.
4 SITE DESCRIPTION

2020 Frederick Road (shown in Figure 2) is located along Frederick Road (MD-355), a divided roadway consisting of three southbound and two northbound travel lanes in the vicinity of the site. Turning lanes form on each direction of the roadway at nearby intersections.

Figure 2: Existing site and surroundings, with the project’s LOD approximately outlined in red. Aerial image from Google Earth, dated October 18, 2019.

5 NOISE MEASUREMENTS

At the time of this study, statewide measures are being taken to limit the spread of the Coronavirus disease 2019 (COVID-19). Such measures include requesting employees to telework if able, mandating certain business closures, and encouraging the public to stay at home and avoid nonessential travel. As a result, traffic patterns are atypical, and the roadway conditions are likely not an accurate representation of roadway noise levels during more typical times.

Therefore, this study is based on only a computer model to predict noise impact at the site and does not incorporate onsite noise measurements as is typical of Montgomery County noise studies completed by Phoenix Noise & Vibration. However, once traffic patterns return to more normal conditions, an onsite 24-hour measurement survey will be conducted. At that time, noise impact at the site will be reevaluated, and this noise study will be updated as necessary.
6 COMPUTER MODELING

6.1 Future Model
The future site was computer-modeled using the CadnaA software program, a three-dimensional noise propagation model capable of determining noise impact from multiple noise sources across vertical and horizontal surfaces while accounting for factors such as topography, buildings, barriers, surface reflections, and roadway data (traffic volumes, speeds, and vehicle classifications, etc.). Noise levels can be presented either in spot locations or as noise contours of equal value throughout a defined surface area.

A future model was developed to simulate future site conditions, including the future site buildings and site topography, as well as existing surrounding roadways, buildings, and topography. Currently there are no plans to alter any of the roadways in the vicinity of the site; therefore, the existing roadway alignments were used in the future model.

6.2 Roadway Data
Average annual weekday traffic (AAWDT) volumes, vehicle percentages, and nighttime percentages for the roadways were based upon the most recent data published by the Maryland Department of Transportation State Highway Administration (MDOT SHA). The MDOT SHA does not typically provide future traffic data, therefore a conservative, 2% increase in traffic compounded annually until 2040 was assumed. All necessary traffic data are provided in Table 2.

Table 2: Roadway traffic data used in the computer model.

<table>
<thead>
<tr>
<th>Traffic Data</th>
<th>Frederick Rd (MD-355)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019 AAWDT</td>
<td>30,281</td>
</tr>
<tr>
<td>2040 AAWDT</td>
<td>45,896</td>
</tr>
<tr>
<td>Truck %</td>
<td>4%</td>
</tr>
<tr>
<td>Nighttime Volume %</td>
<td>11%</td>
</tr>
<tr>
<td>Posted Speed Limit (mph)</td>
<td>45</td>
</tr>
</tbody>
</table>

6.3 Future Noise Impact
The future model calculated the projected ground level (5 feet above adjacent grade) and upper level (25 feet above adjacent grade) noise levels throughout the future site (shown on Drawings 1 and 2 of the Appendix, respectively), as well as noise levels across all facades of the future multifamily buildings (shown on Drawings 3 and 4 of the Appendix).

All noise levels shown on Drawings 1–4 are “mitigated” noise levels, i.e. calculated in the presence of the future site buildings and site topography, as well as all existing surrounding buildings, topography, and significant structures. Mitigated noise levels account for the effect of buildings and other significant structures in reducing and reflecting roadway noise propagation and are more representative of the actual noise level experienced at a specific location.

2 Future site information provided in AutoCAD format by Bohler on June 15, 2020.

3 Montgomery County typically requires that roadway noise impact studies be conducted using the projected traffic volumes 20 years from the date of the study.
Drawing 1 of the Appendix indicates that noise levels in the public open spaces to the east of Buildings B and C, between the buildings and Frederick Road, will be above 60 dBA Ldn. Conversely, noise levels in the three remaining open public spaces to the west will be below 60 dBA Ldn as these areas will be located sufficiently far from Frederick Road (MD-355).

Drawing 2 of the Appendix indicates that living units on the north, east, and south elevations of Building B will be exposed to future transportation noise levels above 60 dBA Ldn. Drawing 2 also indicates that living units on the west elevation of Building B and all living units throughout Building A will not be exposed to noise levels above 60 dBA Ldn.

Drawings 3 and 4 of the Appendix show the noise impact upon all elevations of Buildings A and B, respectively, presented in varying colors to represent how the noise impact changes at various locations on the building, especially with respect to height and orientation to Frederick Road (MD-355).

Noise impact upon each elevation of both future multifamily buildings is summarized in Table 3.

**Table 3: Future (year 2040) transportation noise impact by elevation upon both multifamily buildings at 20220 Frederick Road.**

<table>
<thead>
<tr>
<th>Building</th>
<th>Building Elevation</th>
<th>Future Noise Impact (dBA Ldn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>North</td>
<td>44-56</td>
</tr>
<tr>
<td></td>
<td>East</td>
<td>49-57</td>
</tr>
<tr>
<td></td>
<td>South</td>
<td>41-55</td>
</tr>
<tr>
<td></td>
<td>West</td>
<td>33-50</td>
</tr>
<tr>
<td>B</td>
<td>North</td>
<td>55-67</td>
</tr>
<tr>
<td></td>
<td>East</td>
<td>64-70</td>
</tr>
<tr>
<td></td>
<td>South</td>
<td>58-69</td>
</tr>
<tr>
<td></td>
<td>West</td>
<td>41-56</td>
</tr>
</tbody>
</table>

**Table 3 Notes:**

A. Note that noise levels in **BOLD RED** indicate noise impact of 60 dBA Ldn and greater.

Regarding the Appendix Drawings and Table 3, note the following:

- Noise levels in the public open spaces to the east of Buildings B and C will be above 60 dBA Ldn. These public open spaces will consist of a sidewalk and landscaping, and are not intended to be offered as amenity spaces to be used for extended periods of time. However, if these areas qualify as areas subject to Montgomery County’s outdoor activity area noise guidelines, additional mitigation in the form of a berm and/or barrier will be required for these impacted outdoor areas (see Section 7.1 – Outdoor Noise Levels). Conversely, noise levels in the remaining public open spaces to the west will be below 60 dBA Ldn; therefore, additional mitigation will not be required for these remaining outdoor areas.
• Living units located on the north, east, and south elevations of Building B will be exposed to noise levels above 60 dBA Ldn. Further analysis will be required for impacted living units on these elevations to determine whether modifications to the proposed building construction will be necessary to maintain interior noise levels below 45 dBA Ldn within these living units (see Section 7.2 – Interior Noise Levels).

• Living units located on the west elevation of Building B, as well as all living units throughout the entirety of Building A, will not be exposed to future transportation noise levels above 60 dBA Ldn. Further analysis will not be required for these remaining living units and according to Montgomery County’s noise regulations, the proposed building construction may be used for all remaining living units.

• Note that Building C is designated for commercial use and is not required to meet Montgomery County’s noise regulations.

Please recall that at this time, future noise impact at the site has been determined based only on a computer model. Once onsite measurements are incorporated into the analysis, future noise impact at the site will be reevaluated and the results may differ from those presented in this analysis. Any necessary updates to this noise study will be made at that time.
7 Mitigation

According to Montgomery County’s noise regulations for residential development, residential sites and buildings impacted by noise levels above the guideline Ldn value assigned to a site require further analysis to determine the mitigation measures necessary to maintain noise levels in outdoor activity areas below the assigned Ldn value. 20220 Frederick Road is located within the 60 dBA Ldn noise zone, therefore noise levels in outdoor activity areas and interior living spaces must be below 60 and 45 dBA Ldn, respectively.

7.1 Outdoor Noise Levels

Noise levels will be above 60 dBA Ldn in the two public open spaces to the east of Buildings B and C. These areas will consist of a public sidewalk and landscaping and are not intended for extended periods of outdoor use. However, if these areas are subject to Montgomery County’s outdoor activity area noise guidelines, mitigation in the form of a berm and or barrier will be required for these areas in order to maintain noise levels below 60 dBA Ldn.

Conversely, noise levels in the three remaining public open spaces to the west will be below 60 dBA Ldn; therefore, additional mitigation will not be required for these remaining outdoor areas as they will be located sufficiently far from Frederick Road (MD-355).

7.2 Interior Noise Levels

7.2.1 Building Shell Analysis

According to the future noise levels shown on Drawings 3 and 4 of the Appendix, living units on the north, east, and south elevations of Building B will be exposed to future transportation noise levels above 60 dBA Ldn; therefore, these impacted residential units require further analysis to determine whether the proposed building construction will be capable of maintaining interior noise levels below 45 dBA Ldn. This evaluation, or “building shell analysis,” calculates a room’s interior noise level based upon its exterior noise level, the Sound Transmission Class (STC) ratings4 of its various building components, the amount of exposed exterior wall area, and the room’s size and finish.

Modifications to standard building construction may not be necessary for all impacted units; it is possible that the proposed standard building construction will provide sufficient noise reduction to maintain the required 45 dBA Ldn interior noise level for exterior noise levels above 60 dBA Ldn, especially if exterior noise impact is only slightly above 60 dBA Ldn.

A building shell analysis will be completed for Building B at 20220 Frederick Road at a later time, once noise impact determination at the site can be verified through onsite noise measurements and once detailed architectural plans are available. At that time, noise impact will be analyzed on a floor-by-floor basis for each individual living unit impacted by transportation noise levels above 60 dBA Ldn. Likewise, mitigation requirements will also be provided for each individual living unit. Calculating minimum STC ratings specific to each unit reduces “overbuilding” (i.e. installing windows/doors with unnecessarily high STC ratings).

---

4 The STC rating is a single number value which describes a building element’s (wall, window, door, roof, etc.) ability to reduce noise transmission from one side of the partition to the other.
To aid in the early phases of the design process and provide information on the factors that influence noise reduction in residential buildings, general mitigation design guidelines and explanations are provided in the section that follows.

### 7.2.2 STC Rating Requirements

The noise reduction provided by a building structure, and the resulting interior noise level, are primarily dependent upon the percentage of the exterior wall surface area occupied by “non-wall” items and the STC ratings of these items. These items, typically windows and doors, act as “holes” in what would otherwise be a relatively effective exterior wall, significantly reducing its ability to prevent noise transmission. Consequently, the exterior surface area occupied by windows and doors is a significant issue. This information is recorded and tracked so that the STC ratings of exterior elements can be adjusted accordingly until the required interior noise level is achieved.

While the wall construction is also an important factor, the “holes” in the wall (i.e. the windows and doors) must be addressed first if the noise reduction of the overall building shell is to be significantly increased and the interior noise level decreased. This can be accomplished by reducing the size of existing windows/doors and/or increasing the STC ratings of windows/doors.

Table 4 and Table 5 illustrate this concept, indicating window/door STC rating requirements based upon the window/door (or glass) area when using either cementitious/Hardi panel or brick/masonry exterior walls. The STC ratings shown are those necessary to maintain interior noise levels at 45 dBA Ldn when using the specified exterior wall construction. When looking at Table 4 and Table 5, recall that the maximum noise impact upon Building B at 20220 Frederick Road will be 70 dBA Ldn.

The values included in Table 4 and Table 5 were calculated using one generic room (15 feet x 15 feet, carpeted room with two walls exposed to noise) to demonstrate the concept of varying window/door percentages and the resulting effect on required STC ratings. Values in Table 4 and Table 5 should not be universally applied to exterior noise impact upon Building B at 20220 Frederick Road; however they can be used to gain a general idea of the window/door STC ratings to be expected based upon the level of noise impact upon a building elevation. Actual STC ratings will depend upon interior room finishes and characteristics, room/building orientation with respect to the noise source, building geometry, etc.

---

5 STC ratings were calculated assuming exterior walls constructed of one layer of 5/8” interior gypsum board, 2” x 4” wood studs with 3.5” fiberglass batt insulation, one layer of ½” exterior plywood, and the specified exterior wall finish.
Table 4: Hypothetical window/door STC ratings with cementitious or Hardi panel exterior walls.

<table>
<thead>
<tr>
<th>Percentage of Exterior Wall Area Occupied by Windows/Doors</th>
<th>Required Window/Door STC Rating Necessary to Maintain Interior Noise Levels Below 45 dBA Ldn (When Using Cementitious or Hardi Panel Exterior Walls)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>40%</td>
</tr>
<tr>
<td>20%</td>
<td>25</td>
</tr>
<tr>
<td>40%</td>
<td>25</td>
</tr>
<tr>
<td>40%</td>
<td>27</td>
</tr>
<tr>
<td>60%</td>
<td>27</td>
</tr>
<tr>
<td>60%</td>
<td>28</td>
</tr>
<tr>
<td>80%</td>
<td>28</td>
</tr>
</tbody>
</table>

Table 5: Hypothetical window/door STC ratings with brick/masonry exterior walls.

<table>
<thead>
<tr>
<th>Percentage of Exterior Wall Area Occupied by Windows/Doors</th>
<th>Required Window/Door STC Rating Necessary to Maintain Interior Noise Levels Below 45 dBA Ldn (When Using Brick/Masonry Exterior Walls)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>40%</td>
</tr>
<tr>
<td>20%</td>
<td>25</td>
</tr>
<tr>
<td>40%</td>
<td>25</td>
</tr>
<tr>
<td>40%</td>
<td>27</td>
</tr>
<tr>
<td>60%</td>
<td>27</td>
</tr>
<tr>
<td>60%</td>
<td>30</td>
</tr>
<tr>
<td>80%</td>
<td>28</td>
</tr>
<tr>
<td>80%</td>
<td>32</td>
</tr>
<tr>
<td>60%</td>
<td>32</td>
</tr>
<tr>
<td>60%</td>
<td>33</td>
</tr>
</tbody>
</table>

STC ratings apply to one individual element. The composite STC rating is the overall STC rating of a partition with multiple elements (e.g. a wall with a window) and is always controlled by the building element with the lowest individual STC rating. In residential construction, this is almost always the glass (windows and doors); therefore, the percentage of the exterior wall occupied by glass becomes critical. This also means the amount of exterior noise heard inside a unit is primarily dependent on the glass percentage and STC rating, not the wall STC rating.

In other words, when the glass occupies such a significant portion of the exterior wall, increasing the wall STC rating even drastically will not decrease the interior noise level. Increasing the composite STC rating of the partition must be accomplished by first addressing the “weakest link” in the partition (i.e. the glass).

Note that when windows and/or doors occupy a high percentage of the impacted facade, substantially higher window/door STC ratings than those typically used in standard construction (usually around 25 STC) may be required depending upon the noise level impact.
8 CONCLUSION

As stated previously, the results of this Phase I Noise Analysis have been based only on a computer model of the site and do not incorporate onsite noise measurements. Once onsite measurements are made, future noise impact at the site will be reevaluated, and this analysis will be updated as necessary. The computer model developed as part of this analysis was based on site information made available at the time of this study, including existing and proposed topography, existing roadway alignments, and the future site buildings.

Based on computer modeling of the 20220 Frederick Road site, noise levels in the proposed public open spaces located between Frederick Road and Buildings B and C will be above 60 dBA Ldn. If these areas are subject to Montgomery County’s outdoor activity area noise regulations, mitigation in the form of a berm and/or barrier will be required for these areas in order to maintain noise levels below Montgomery County’s limit of 60 dBA Ldn. Conversely, noise levels in the three remaining public open spaces to the west will be below 60 dBA Ldn, as these areas will be located sufficiently far from Frederick Road (MD-355). Additional mitigation will not be required for these three remaining outdoor areas.

Results also indicate that the proposed multifamily Building B will be exposed to future transportation noise levels above 60 dBA Ldn, with a maximum noise impact of 70 dBA Ldn upon living units on the east elevation. Impacted living units include those located on the north, east, and south elevations of Building B. Further analysis is required for these impacted living units to determine whether building construction modifications will be required to maintain interior noise levels below 45 dBA Ldn to achieve compliance with Montgomery County’s noise regulations for residential development. Depending on the noise level specific to each impacted living unit, building construction requirements may include upgraded windows and/or doors with higher STC ratings. The extent of building construction modifications required for all impacted living units will be determined at a later time once future noise impact determination at the site can be verified through onsite noise measurements and detailed architectural plans for the building are available.

All remaining living units (including those located on the west elevation of Building B, as well as the entirety of units located throughout Building A) will not be exposed to future transportation noise levels above 60 dBA Ldn; therefore, further analysis will not be required for these living units and the proposed building construction may be used without modification for these living units to comply with Montgomery County’s noise regulations.
APPENDIX
Future Transportation Noise Levels (dBA Ldn)

1. Looking Northeast (Building B)
2. Looking Northwest (Building B)
3. Looking Southeast (Building B)
4. Looking Southwest (Building B)
Alternative C - BRT in Curb

- Dedicated curb lanes, where feasible
- Off-board fare collection
- Level boarding
- New BRT vehicles
- Upgraded stations
- FLASH branding
- Transit Signal priority
- Pedestrian and bike improvements
- Queue jumps
MD 355 BRT STUDY

- Potential BRT Station Location
- Alignment for Alternative A (Clarksburg Outlets to Snowden Farm Parkway to Ridge Road to Observation Drive to Middlebrook Road)
- Alignment for Alternative B (Clarksburg Outlets to Observation Drive to Middlebrook Road – including unbuilt portions of Observation Drive)
- Alignment for Alternative C (Clarksburg Outlets to Middlebrook Road via MD 355)
- BRT route from Bethesda Metro station to Middlebrook Road
- Metrorail Red Line
- Metrorail Station
- Purple Line (planned)